

J. Muhammad

1638

P#5

PAGE: 1

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/464,528A

DATE: 04/21/2000
TIME: 09:15:30

Input Set: I464528A.RAW

This Raw Listing contains the General Information
Section and up to first 5 pages.

ENTERED

P.5

1 <110> APPLICANT: Li, Zhongsen
2 Falco, S. Carl
3 <120> TITLE OF INVENTION: S-ADENOSYL-L-METHIONINE SYNTHETASE PROMOTER AND
4 ITS USE IN EXPRESSION OF TRANSGENIC GENES IN PLANTS
5 <130> FILE REFERENCE: BB1205 US NA
6 <140> CURRENT APPLICATION NUMBER: US/09/464,528A
7 <141> CURRENT FILING DATE: 1999-12-15
8 <160> NUMBER OF SEQ ID NOS: 20
9 <170> SOFTWARE: Microsoft Office 97
10 <210> SEQ ID NO 1
11 <211> LENGTH: 1518
12 <212> TYPE: DNA
13 <213> ORGANISM: Glycine max
14 <400> SEQUENCE: 1
15 agccaagccc cactcaacca ccacaccact ctctctgctc ttcttctacc tttcaagttt 60
16 ttaaagtatt aagatggcag agacattcct atttacctca gagtcagtga acgagggaca 120
17 ccctgacaag ctctgcgacc aaatctccga tgcgtgcctc gacgcttgcc ttgaacagga 180
18 cccagacagc aaggttgccct gcgaaacatg caccaagacc aacttggtca tggcttcggy 240
19 agagatcacc accaaggcca acgttgacta cgagaagatc gtgcgtgaca cctgcaggaa 300
20 catcggtctt gtctcaaacy atgtgggact tgatgctgac aactgcaagg tccttgtaaa 360
21 cattgagcag cagagccctg atattgccca ggggtgtgcac ggccacctta ccaaaaagacc 420
22 cgaggaaatc ggtgctggag accaggggtca catgtttggc tatgccacgy acgaaaacccc 480
23 agaattgatg ccattgatgc atgttcttgc aactaaactc ggtgctcgtc tcaccgaggt 540
24 tcgcaagaac ggaacctgcc catggttgag gcctgatggg aaaacccaag tgactgttga 600
25 gtattacaat gacaacggtg ccattggtcc agttcgtgtc cacactgtgc ttatctccac 660
26 ccaacatgat gagactgtga ccaacgacga aattgcagct gacctcaagg agcatgtgat 720
27 caagccggtg atcccggaga agtaccttga tgagaagacc attttccact tgaacccctc 780
28 tggccgtttt gtcattggag gtcctcacgy tgatgctggt ctcaccggcc gcaagatcat 840
29 catcgatact tacggaggat ggggtgctca tgggtggtgt gctttctccg ggaaggatcc 900
30 caccaaggtt gataggagtg gtgcttacat tgtgagacag gctgctaaga gcattgtggc 960
31 aagtggacta gccagaaggt gcattgtgca agtgtcttat gccattggtg tgcccagagc 1020
32 tttgtctgtc tttgttgaca cctatggcac cgggaagatc catgataagg agattctcaa 1080
33 cattgtgaag gagaactttg atttcaggcc cggatgatc tccatcaacc ttgatctcaa 1140
34 gaggggtggg aataacaggt tcttgaagac tgctgcatat ggacacttcg gcagagagga 1200
35 ccctgacttc acatgggaag tgggtcaagcc cctcaagtgy gagaaggcct aaggccattc 1260
36 attccactgc aatgtgctgy gagtttttta gcgttgccct tataatgtct attatccata 1320
37 actttccacy tcccttgctc tgtgtttttc tctcgtcgtc ctctctctat tttgtttctc 1380
38 ctgcctttca tttgtaattt tttacatgat caactaaaaa atgtactctc tgttttccga 1440
39 ccattgtgtc tcttaatatc agtatcaaaa agaattgtcc aagttaaaaa aaaaaaaaaa 1500
40 aaaaaaaaaa aaaaaaaaaa 1518
41 <210> SEQ ID NO 2
42 <211> LENGTH: 2336
43 <212> TYPE: DNA
44 <213> ORGANISM: Glycine max

RECEIVED
MAY 17 2000
1600 MAIL ROOM

PAGE: 2

RAW SEQUENCE LISTING PATENT APPLICATION US/09/464,528A

DATE: 04/21/2000
TIME: 09:15:30

Input Set: I464528A.RAW

```

45 <400> SEQUENCE: 2
46 atcgatagag acatgttatt cacaaaccat aaaatgatgg ctaaaattgg tgtgattgga 60
47 acgatatctg tttattatga tttcagggcg caaaaatgcy agtacttaat aaaattttac 120
48 atttaaatta gaattttttt tatcaataaa tattaattta ttagttttat tagaaatatt 180
49 aattagaaaa ttttgaatcc ccgattttct ctccttttct tcygtattca tcatttttcta 240
50 accaaaccaa tcttatatgt tcttcaaatt agaacttgaa attattaatt ataattaaac 300
51 tgaaaacaat ttggtatcaa ttcataatac tgcttagtaa taaaatgcga taattaattg 360
52 ataaatctgc aaaagatttt acaaatatct ttcagaaaaa attaataaca aattttgtcg 420
53 ttttcatggg gttgggtctga ggaggatttg gcactataga actctcttac ggaccattct 480
54 ttgcacttca actaaacgat ggtcagaatt ggtggggatt ttatattcaa gcataccct 540
55 ttcaaaactt cctacttact tctgtcgttc ggtaatcggt aacatttagac tttcaaaatc 600
56 atttttaacc cctaaacagt aaatttgaag gacaaaaata atatttttca aatttgatag 660
57 actatttttt ttttgtaatt tgacgaacca aaaccagatt tatcctgaat ttaggaacc 720
58 acagatgtaa ctaaaccaat atttatttat tttctaaaac aaaatttcat ggcagcatgc 780
59 ctcagcccat gaaaaaaacc ttataaaaat atctacacat tgaccattga aaagtctcgt 840
60 ctcccatggg taaccagatc aaactcacat ccaaacataa catggatatt tccttaccaa 900
61 tcatactaatt tattttgggt taaatattaa tcattatttt taagatatta attaagaaat 960
62 taaaagattt tttaaaaaaa tgtataaaat tatattattc atgatttttc atacatttga 1020
63 ttttgataat aaatatattt tttttaattt cttaaaaaat gttgcaagac acttattaga 1080
64 catagtcttg ttctgtttac aaaagcattc atcatttaat acattaaaaa atattttaata 1140
65 ctaacagtag aatcttcttg tgagtgggtg gggagtaggc aacctggcat tgaaacgaga 1200
66 gaaagagagt cagaaccaga agacaaataa aaagtatgca acaaacaaat caaaatcaaa 1260
67 gggcaaaggc tgggggtggc tcaattgggt gctacattca attttcaact cagtcaacgg 1320
68 ttgagattca ctctgacttc cccaatctaa gccgcggatg caaacgggtg aatctaacc 1380
69 acaatccaat ctctgtactt aggggctttt ccgtcattaa ctcacccctg ccaccgggt 1440
70 tccctataaa ttggaactca atgctccctt ctaaacctgt atcgcttcag agttgagacc 1500
71 aagacacact cgttcatata tctctctgct cttctcttct cttctacctc tcaagggtact 1560
72 tttcttctcc ctctaccaa tcttagattc cgtgggtcaa tttcggtatc tgcacttctg 1620
73 gtttgctttg ccttgctttt tctcaactg ggtccatcta ggatccatgt gaaactctac 1680
74 tctttcttta atatctgcgg aatacgcgtt ggactttcag atctagtoga aatcatttca 1740
75 taattgcctt tctttctttt agcttatgag aaataaaatc attttttttt atttcaaaat 1800
76 aaaccttggg ccttggtgct actgagatgg ggtttggtga ttacagaatt ttagcgaatt 1860
77 ttgtaattgt acttggttgt ctgtagtgtt gtttggtttt cttggttctc atacattcct 1920
78 taggcttcaa ttttattcga gtataggtca caataggaat tcaaaacttg agcaggggaa 1980
79 ttaatccctt ctttcaaact cagtttggtt gtatatatgt ttaaaaaatg aaacttttgc 2040
80 tttaaattct attataactt tttttatggc aaaaattttt gcatgtgtct ttgctctcct 2100
81 gttgtaaatt tactgtttag gtactaactc taggcttggt gtgcagtttt tgaagtataa 2160
82 agatggcaga gacattccta ttcacctcgg agtcagtga cgaggggacac cctgataagc 2220
83 tctgcgacca aatctccgat gctgtcctcg acgcttgct cgaacaggac ccagacagca 2280
84 aggttgctcg cgaaacatgc accaagacca acttggtcat ggtcttcgga gagatc 2336
85 <210> SEQ ID NO 3
86 <211> LENGTH: 522
87 <212> TYPE: DNA
88 <213> ORGANISM: Glycine max
89 <220> FEATURE:
90 <221> NAME/KEY: unsure
91 <222> LOCATION: (405)
92 <220> FEATURE:
93 <221> NAME/KEY: unsure
94 <222> LOCATION: (509)

```

RECEIVED
MAY 17 2000
TC 1600 MAIL ROOM

PAGE: 3

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/464,528A

DATE: 04/21/2000
TIME: 09:15:30

Input Set: I464528A.RAW

95 <220> FEATURE:
96 <221> NAME/KEY: unsure
97 <222> LOCATION: (515)
98 <400> SEQUENCE: 3
99 gaccaagaca cactcgttca tatatctctc tgctcttctc ttctcttcta cctctcaagt 60
100 ttttgaagta taaagatggc agagacattc ctattcacct cggagtcagt gaacgagggg 120
101 caccctgata agctctgcga ccaaattctcc gatgctgtcc tcgacgcttg cctcgaacag 180
102 gaccagaca gcaagggtgc ctgcgaaaca tgcaccaaga ccaacttggc catggtcttc 240
103 ggagagatca ccaccaaggc caacgttgac tacgagaaga tcgtgcgtga cacctgcagg 300
104 agcatcggct tcatctcaaa cgatgtggga cttgatgctg acaactgcaa ggctcttgta 360
W--> 105 aacattgagc agcagagccc tgatattgcc cagggcgtgc acggnacacct taccaaaaga 420
106 cctgaagaaa ttggcgctgg tgaccaaggc cacatggttg gctatgccac tgatgaaacc 480
W--> 107 ccaaaattca tgccattgag tcatgttctc gcaancaagc tc 522
108 <210> SEQ ID NO 4
109 <211> LENGTH: 32
110 <212> TYPE: DNA
111 <213> ORGANISM: Artificial Sequence
112 <220> FEATURE:
113 <223> OTHER INFORMATION: Description of Artificial Sequence: PCR Primer
114 <400> SEQUENCE: 4
115 catgccatgg ctttatactt caaaaactgc ac 32
116 <210> SEQ ID NO 5
117 <211> LENGTH: 24
118 <212> TYPE: DNA
119 <213> ORGANISM: Artificial Sequence
120 <220> FEATURE:
121 <223> OTHER INFORMATION: Description of Artificial Sequence: PCR Primer
122 <400> SEQUENCE: 5
123 gctctagatc aaactcacat ccaa 24
124 <210> SEQ ID NO 6
125 <211> LENGTH: 1314
126 <212> TYPE: DNA
127 <213> ORGANISM: Glycine max
128 <400> SEQUENCE: 6
129 tctagatcaa actcacatcc aaacataaca tggatatctc cttaccaatc atactaatta 60
130 ttttgggtta aatattaatc attattttta agatattaat taagaaatta aaagattttt 120
131 taaaaaaatg tataaaatta tattattcat gatttttcat acatttgatt ttgataataa 180
132 atatattttt tttaatttct taaaaaatgt tgcaagacac ttattagaca tagtcttggt 240
133 ctgtttacaa aagcattcat catttaatac attaaaaaat atttaatact aacagtagaa 300
134 tcttcttggt agtgggtggt gagtaggcaa cctggcattg aaacgagaga aagagagtca 360
135 gaaccagaag acaataaaaa agtatgcaac aaacaaatca aaatcaaagg gcaaaggctg 420
136 gggttggctc aattggttgc tacattcaat ttccaactca gtcaacgggt gagattcact 480
137 ctgacttccc caatctaagc cgcggatgca aacgggtgaa tctaaccac aatccaatct 540
138 cgttacttag gggttttcc gtcattaact caccctgcc acccggttcc cctataaatt 600
139 ggaactcaat gtcacctct aaactcgtat cgcttcagag ttgagaccaa gacacactcg 660
140 ttcataatc tctctgctc tctcttctc tctacctc aaggtaactt tcttctccct 720
141 ctaccaaate ctagattcgg tggttcaatt tcggatcttg cacttctggt ttgctttgcc 780
142 ttgctttttc ctcaactggg tccatctagg atccatgtga aactctactc tttctttaat 840
143 atctgcggaa tacggttgg actttcagat ctagtgcgaa tcatttcata attgccttcc 900
144 tttcttttag cttatgagaa ataaaatcat ttttttttat ttcaaaataa acctggggcc 960

PAGE: 4

RAW SEQUENCE LISTING PATENT APPLICATION US/09/464,528A

DATE: 04/21/2000
TIME: 09:15:30

Input Set: I464528A.RAW

145 ttgtgctgac tgagatgggg tttggtgatt acagaatttt agcgaatttt gtaattgtac 1020
146 ttgtttgtct gtagttttgt tttgttttct tgtttctcat acattcctta ggcttcaatt 1080
147 ttattcgagt ataggtcaca ataggaattc aaactttgag caggggaatt aatcccttcc 1140
148 ttcaaatcca gtttgtttgt atatatgttt aaaaaatgaa acttttgctt taaattctat 1200
149 tataactttt tttatggcaa aaatttttgc atgtgtcttt gctctcctgt tgtaaattta 1260
150 ctgttttaggt actaactcta ggcttggtgt gcagtttttg aagtataacc atgg 1314

151 <210> SEQ ID NO 7

152 <211> LENGTH: 22

153 <212> TYPE: DNA

154 <213> ORGANISM: Artificial Sequence

155 <220> FEATURE:

156 <223> OTHER INFORMATION: Description of Artificial Sequence: PCR Primer

157 <400> SEQUENCE: 7

158 ttcgagtata ggtcacaata gg 22

159 <210> SEQ ID NO 8

160 <211> LENGTH: 19

161 <212> TYPE: DNA

162 <213> ORGANISM: Artificial Sequence

163 <220> FEATURE:

164 <223> OTHER INFORMATION: Description of Artificial Sequence: PCR Primer

165 <400> SEQUENCE: 8

166 cttcgctgag gacatggac 19

167 <210> SEQ ID NO 9

168 <211> LENGTH: 21

169 <212> TYPE: DNA

170 <213> ORGANISM: Artificial Sequence

171 <220> FEATURE:

172 <223> OTHER INFORMATION: Description of Artificial Sequence: PCR Primer

173 <400> SEQUENCE: 9

174 gagttgtcgc tgttgttcga c 21

175 <210> SEQ ID NO 10

176 <211> LENGTH: 20

177 <212> TYPE: DNA

178 <213> ORGANISM: Artificial Sequence

179 <220> FEATURE:

180 <223> OTHER INFORMATION: Description of Artificial Sequence: PCR Primer

181 <400> SEQUENCE: 10

182 aacacagcat ccgcattgcg 20

183 <210> SEQ ID NO 11

184 <211> LENGTH: 21

185 <212> TYPE: DNA

186 <213> ORGANISM: Artificial Sequence

187 <220> FEATURE:

188 <223> OTHER INFORMATION: Description of Artificial Sequence: PCR Primer

189 <400> SEQUENCE: 11

190 aggagtgcag aatcagatca g 21

191 <210> SEQ ID NO 12

192 <211> LENGTH: 20

193 <212> TYPE: DNA

194 <213> ORGANISM: Artificial Sequence

PAGE: 5

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/464,528A

DATE: 04/21/2000
TIME: 09:15:30

Input Set: I464528A.RAW

```

195 <220> FEATURE:
196 <223> OTHER INFORMATION: Description of Artificial Sequence: PCR Primer
197 <400> SEQUENCE: 12
198      gctgacgaa ccagatggag                                     20
199 <210> SEQ ID NO 13
200 <211> LENGTH: 23
201 <212> TYPE: DNA
202 <213> ORGANISM: Artificial Sequence
203 <220> FEATURE:
204 <223> OTHER INFORMATION: Description of Artificial Sequence: PCR Primer
205 <400> SEQUENCE: 13
206      ctgtacagtt aaacagtagt tct                                     23
207 <210> SEQ ID NO 14
208 <211> LENGTH: 2165
209 <212> TYPE: DNA
210 <213> ORGANISM: Glycine max
211 <400> SEQUENCE: 14
212      atcgatagag acatgttatt cacaaccat aaaatgatgg ctaaaattgg tgtgattgga      60
213      acgatatctg tttattatga tttcagggcg caaaaatgcy agtacttaat aaaattttac      120
214      atttaaatta gaattttttt tatcaataaa tattaattta ttagttttat tagaaatatt      180
215      aattagaaaa ttttgaatcc ccgattttct ctccttttct tcgctattca tcattttcta      240
216      accaaaccaa tcttatatgt tcttcaaatt agaacttgaa attattaatt ataattaaac      300
217      tgaaaacaat ttggtatcaa ttcataata tgcttagtaa taaaatgcga taattaattg      360
218      ataaatctgc aaaagatttt acaaatatct ttcagaaaaa attaataaca aattttgtcg      420
219      ttttcatggg gttggtctga ggaggatttg gcactataga actctcctac ggaccattct      480
220      ttgcacttca actaaacgat ggtcagaatt ggtggggatt ttatattcaa gcatatccct      540
221      ttcaaaactt cctacttact tcgtgcgttc ggtaatcggt aacattagac tttcaaaatc      600
222      atttttaacc cctaaacagt aaatttgaag gacaaaaata atatttttca aatttgatag      660
223      actatttttt ttttgtaatt tgacgaacca aaaccagatt tatcctgaat tttagggaacc      720
224      acagatgtaa ctaaaccaat atttatttat tttctaaaac aaaatttcat ggcagcatgc      780
225      ctccatggg taaccagatc aaactcacat ccaaacataa catggatatt tccttaccac      840
226      tcatactaatt tattttgggt taaatattaa tcattatttt taagatatta attaagaaat      960
227      taaaagattt tttaaaaaaa tgtataaaat tatattattc atgatttttc atacatttga      1020
228      ttttgataat aaatatattt tttttaattt cttaaaaaat gttgcaagac acttattaga      1080
229      catagtcttg ttctgtttac aaaagcattc atcattttaat acattaaaaa atattttaata      1140
230      ctaacagtag aatcttcttg tgagtgggtg gggagtaggc aacctggcat tgaaacgaga      1200
231      gaaagagagt cagaaccaga agacaaataa aaagtatgca acaaacaaat caaaatcaaa      1260
232      gggcaaaggc tggggttggc tcaattgggt gctacattca attttcaact cagtcaacgg      1320
233      ttgagattca ctctgacttc cccaatctaa gccgcggatg caaacgggtg aatctaacc      1380
234      acaatccaat ctctgtactt aggggctttt ccgtcattaa ctcaccctcg ccaccgggt      1440
235      tccctataaa ttggaactca atgctccct ctaaactcgt atcgcttcag agttgagacc      1500
236      aagacacact cgttcatata tctctctgct cttctcttct cttctacctc tcaagggtact      1560
237      tttcttctcc ctctaccaa tcctagattc cgtgggtcaa tttcggtatc tgcaactctg      1620
238      gtttgctttg ccttgctttt tcctcaactg ggtccatcta ggatccatgt gaaactctac      1680
239      tctttcttta atatctgcgg aatacgcgtt ggactttcag atctagtcca aatcatttca      1740
240      taattgcctt tctttctttt agcttatgag aaataaaatc attttttttt atttcaaaat      1800
241      aaaccttggg ccttggtgct actgagatgg ggtttggtga ttacagaatt ttagcgaatt      1860
242      ttgtaattgt actgtttgt ctgtagtttt gttttgtttt cttgtttctc atacattcct      1920
243      taggcttcaa ttttattcga gtataggcca caataggaat tcaaactttg agcaggggaa      1980

```

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.



Input Set: I464528A.RAW

Line	Error/Warning	Original Text
105	W "N" or "Xaa" used: Feature required	aacattgagc agcagagccc tgatattgcc cagggcgt
107	W "N" or "Xaa" used: Feature required	ccaaaattca tgccattgag tcatgttcnt gcaancaa
361	W "N" or "Xaa" used: Feature required	accacgnacg ccggaaggtt gccgcagcgt gtggattg
483	W "N" or "Xaa" used: Feature required	agaccacgna cgccggaagg ttgccgcagc gtgtggat
552	W "N" or "Xaa" used: Feature required	gaccacgnac gccggaaggt tgccgcagcg tgtggatt
625	W "N" or "Xaa" used: Feature required	agatccaaca cttacgtttg caacgtccaa gagcaaat